IN THE SPECIFICATION

The paragraph beginning at page 2, line 12 has been amended as follows:

Another disadvantage of the EuOBr is that the europium concentration is very different, both within a layer in proximity to the substrate, ~~or surface~~ and from vapor deposition-to-vapor deposition ~~vapor deposition to vapor deposition~~, in particular when EuOBr is vaporized from the reservoir. Vaporizing from the reservoir means that EuOBr is filled once and only CsBr is replenished for each vapor deposition.

The paragraph beginning at page 2, line 17 has been amended as follows:

As can be learned from the depiction, the aforementioned layer ~~comprises~~ contains less europium in the middle at the beginning of the vapor deposition. In contrast, toward the end of the vapor deposition, more europium in the layer is in the middle.

The paragraph beginning at page 2, line 20 has been amended as follows:

The principal reason for the pronounced spreading of the europium values ~~are~~ is the processes that occur upon vaporization of the EuOBr~~, which~~. These processes are described in an article by Haschke et al entitled "Preparation and Vaporization Thermodynamics of Europium Oxide Bromides" from Journal of the American Chemical Society, July 29, 1970, page 4550-4553.

$4\ EuOBr\ (solid) \rightarrow Eu_3O_4Br\ (solid) + EuBr_2\ (vap.) + Br\ (vap.)$

$3\ Eu_3O_4Br\ (solid) \rightarrow 4\ Eu_2O_3\ (solid) + EuBr_2\ (vap.) + Br\ (vap.)$

for a total reaction of:

$12\ EuOBr\ (solid) \rightarrow 4\ Eu_2O_3\ (solid) + 4\ EuBr_2\ (vap.) + 2\ Br\ (vap.)$

The paragraph beginning at page 4, line 14 has been amended as follows:

In an advantageous manner, the ratio between the Eu concentration of the alkali halogenide layer in the proximity ~~to~~ of the substrate, to the Eu concentration of the alkali halogenide layer in the proximity ~~to~~ of the substrate, ~~surface can be reproduced~~ in the co-vaporization of the alkali halogenide with the europium(III)-oxyhalogenide is between ~~a factor of~~ 0.4 and 1.2, and preferably in a range ~~of~~ between 0.6 to 0.8.

The paragraph beginning at page 5, line 24 has been amended as follows:

According to the inventive method, an x-ray luminophore arises according to the following formula:

AB/C:EuD,E

wherein A is ~~an~~ at least one alkali metal from the group consisting of Na, K, Rb and Cs; B and C are at least ~~on~~ one halogenide from the group consisting of F, Cl, Br and I, wherein the group C can be omitted ~~equal 0~~ and D and E are at least one halogenide from the group consisting of F, Cl, Br and I, wherein ~~A, D and/or E~~ D and E can be equal.

The paragraph beginning at page 6, line 15 has been amended as follows:

The method includes providing a molybdenum vaporizer, introducing a mixture of at least one europium(III) oxyhalogenide and at least one alkali halogenide into the vaporizer and heating the mixture to simultaneously vaporize the mixture to vapor-deposit the alkali metal halogenide doped with bivalent europium. As pointed out above ~~hereinabove~~, the x-ray luminophore occurs from the following formula:

AB/C:EuD,E

wherein A is at least one alkali metal from the group consisting of Na, K, Rb and Cs; B and C are at least one halogenide from the group consisting of F, Cl, Br and I, wherein group C can ~~equal 0~~ be omitted and groups D and E are at least one halogenide from the group consisting of F, Cl, Br and I, and wherein ~~A, D and/or E~~ D and E can be equal.